



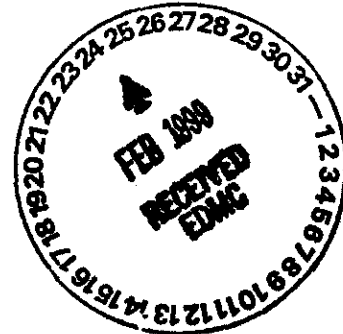
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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

1315 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

February 17, 1999

Mr. James E. Rasmussen, Director
Environmental Assurance, Permits, and Policy Division
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, MSIN: A5-15
Richland, Washington, 99352-0550



Dear Mr. Rasmussen:

Re: 100-N Sewage Lagoon Effluent Improvement Study and Permit Modifications

State Waste Discharge Permit ST-4507 for the 100-N Sewage Lagoon was issued to the U.S. Department of Energy (USDOE), Richland Operations Office, on May 12, 1997. Because effluent data from the lagoon was very limited, the permit required a one-year effluent variability study that monitored a number of constituents discharged from the lagoon. The results of that study are contained in the *100-N Sewage Lagoon Effluent Variability Study State Waste Discharge Permit ST-4507* (FDH 9858865, Rev 0) received November 6, 1998. The Washington State Department of Ecology (Ecology) has reviewed the study and two areas of concern about effluent have been noted. One concern is the high nitrogen levels (when looking at the combined concentrations of ammonia, nitrate, nitrite, and Total Kjeldahl Nitrogen), and the other is the high fecal coliform count. These are common problems in lagoon systems of this type.

At a meeting on January 28, 1999, with USDOE, it was decided to initially seek methods for improving the quality of the effluent, rather than pursuing options such as drilling groundwater-monitoring wells. As a result of the meeting discussions, Ecology is requesting that USDOE evaluate options for improving effluent quality at the 100-N Sewage Lagoon. The evaluation should include, but not be limited to: lagoon process modifications and improvements, seasonal process adjustments, reducing wastewater loading rates, or preparing an engineering study to look at long-term options. The goal of this evaluation is to improve the effluent quality in respect to nitrogen and coliforms. The evaluation should also propose a schedule for implementation of lagoon improvements for Ecology approval. Ecology would support a stepped approach of trying simpler upgrades, then monitoring the results before trying more complex and expensive upgrades.

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Ecology is requesting that USDOE provide a plan and schedule for completing this evaluation by April 1, 1999. The evaluation is the first step in obtaining compliance with the groundwater standards contained in Chapter 173-200 of the Washington State Administrative Code (WAC).

Attached are permit modifications in the form of page changes that require monitoring the effluent for nitrate, ammonia, and fecal coliforms. The changes are needed because the permit requirement for monitoring nitrogen and coliforms expired at the end of the effluent variability study. Ecology can modify permits under the authority in WAC 173-216-130. Ecology chose not to require monitoring of nitrate because the observed concentrations were very low, and will not require the monitoring of the Total Kjeldahl Nitrogen because the observed values closely paralleled the ammonia concentrations (<10% difference).

Condition S2 of the permit was also modified to clarify that sampling is not required if there was no discharge from the lagoon during the regularly scheduled two-week sample period. One other change corrects a reference in Condition S8.

If you have any questions regarding this information, please call me at (509) 736-3011.

Sincerely,



Steven J. Skurla
Permit Manager
Nuclear Waste Program

SS:ld

Attachments

cc: D.J. Ortiz, USDOE
Steve Wisness, USDOE
Doug Sherwood, EPA
Russell Jim, YIN
J. R. Wilkinson, CTUIR
Donna Powaukee, NPT
Tom Harper, FDH
Brian Dixon, DYN
Bill Adair, FDH
Mary Lou Blazek, OOE
Administrative Record:
Liquid Effluent Consent Order
State Waste Discharge Permit ST-4507